

HELP SCREEN

An unsung, and clearly disgruntled, genius once pointed out that 'an expert is someone who ignores the small errors as he sweeps on to the grand fallacy'. Unfortunately, it's usually those small errors that cause problems for PC users – a missed comma here, a space there or a step missed out of the process somewhere else. Rooting out all those tiny errors is hard work. 'One percent inspiration and 99 percent perspiration' – Thomas Edison's definition of genius – and the best way to become a real expert.

Unfortunately, our experts and geni alike have only limited time available. This means that they aren't able to perform for you on an individual basis though they will try to acknowledge letters that arrive with an SAE. They also can't accept phone calls.

However, genius or not we want your input. If you're a newcomer to the eccentric world of PCs then you may need a helping hand over the rough parts – feel free to ask. All questions welcome, the answers are usually relevant to many others.

The experts among you can use these pages to pass on a little learning. Perhaps even to show off a little. See your name in print and gain some fame all in exchange for a few lines of hard won wisdom. There are going to be tricks you've learned to use that make your life easier. Let others know the problems and the solutions – they're often solutions to other problems as well.

It doesn't matter whether you think they're important, your experiences could save someone else hours of

frustration. Share the thrill of discovery with us – in all its gory detail, please, and be in with a chance at a total of £50 worth of real money I'm trying to give away every month. Send those tips to Steve Patient, *Help Screens*, PC PLUS, 30 Monmouth St, Bath, BA1 2BW.



This symbol indicates a query or a tip from someone just starting out with the PC. Either someone for whom all computing is new or perhaps a reader moving up from a different machine. Either way it should be self explanatory.



This is the hackers' haunt. Nothing is too technical for this section. Some may find it more baffling than enlightening but it offers something to get your teeth into.



Just because you use your PC every day doesn't mean you're not occasionally going to be baffled. This is the heading for tips on batch files, pop-ups and utilities.



Danger area! Some of these tips can lead to tears before bedtime. Handle them with extreme caution and remember, PC PLUS can't be held responsible for any data loss or other damage – you have been warned!



This indicates a letter concerning the *SuperDisk*. Advice on using the programs and new twists to old favourites. Special *Help Screen* listings are also featured on the disk.

REDUCED VIEWING



I recently bought a 33Mhz 386 with a SuperVGA screen capable of displaying 800 by 600 and 1024 by 768 pixels as well as the standard VGA modes. However, only the standard 640 by 400 pixel mode fills the screen. If I use the higher resolutions the screen image decreases in size with the highest resolution being the smallest. My supplier is unwilling to sort the problem out for me.

Martin Bevan
Tenby

I'm afraid that your supplier can't sort out the problem except by supplying you with a more modern (and probably more expensive) monitor.

What you have is a multisync monitor, one capable of responding correctly to different input frequencies. However, older multisync designs were unable to compensate for different picture aspect ratios resulting from changing frequencies. They tend to be set up for the default mode of the particular system they will work with. In different resolutions the width of the image remains correct but the height shifts about all over the place. These old-style monitors always include a manual picture height control so that the user can make the adjustment.

Modern multisync designs compensate automatically and will maintain the correct picture height regardless of the resolution of the display.

MAPPA MUNDI



I would like to use a CAD-type program to produce maps of the nature reserves for which I am responsible.

This would allow me to create overlays showing habitat type and so on. I have a lot of PC experience but none with this type of software. I have an Apricot Xen and a LaserJet 500 printer. Could you recommend a suitable package?

R J Evans
South Uist
Outer Hebrides

I feel that a CAD (Computer Aided Design) package is inappropriate for map making. CAD is heavily geared toward straight lines, regular curves, geometric shapes and repetition of smaller units.

A better solution is probably to buy a general drawing package like *CorelDraw!*, *Artline* or *MicroGrafx*. However, you may find that a simple (and indeed cheaper) paint package will meet your particular requirements.

If you can get Ordnance Survey maps scanned then the Trace or Autotrace facilities of drawing packages will produce a map outline from the TIFF (or PCX) scan file for you to work on. Alternatively, use a mouse and some kind of guide (like Tracy reviewed in issue 52) to trace the details you want straight off the original map and then work from that. Even now cartography is mainly hand work and I know of no specialist PC software to help.

NO PROBLEM



In your February issue a reader had a problem with an Epson PC and an Hewlett-Packard Scanjet scanner. HP did in fact get together with Epson and solved this problem almost immediately. The Epson PC has an 'automatic' and 'manual' internal clock speed switch on the front. With the PC switched to 'manual' mode the Scanjet card is recognised.

Valerie Thron
Hewlett-Packard

Thanks for the information – I'm sure it will help others too. It's a pity that I couldn't get the information from Hewlett-Packard or Epson when I originally enquired. My general comments regarding setting up systems with hardware and software from a variety of vendors (pay when you've seen it working) still stands though.

DIPPY MONITOR



Most Amstrad PPC owners have considered buying a colour CGA monitor for home use. I recently bought a budget Samtron SC-452-C model from Reeves. The only problem is with the Amstrad manual. Although it talks about five DIP switches, there are actually six. To save others hours of fun the settings for CGA colour are:

OFF X XX
ON XXX
123456

In case you forget the LCD settings are:

OFF XX
ON XXXX
123456

One other minor problem with the supplied monitor is a non-standard plug – I bought a kettle lead to replace it.
Vince Russett
Cheddar

Attaching CGA monitors to Amstrad PPCs does tend to cause upsets. Not just for the reasons you state but because DIP switches don't take kindly to frequent resets – it's not what they were designed for. Since, as you demonstrate, only one switch changes, some brave souls have wired that one separately to save wear and tear. I don't recommend this procedure unless the DIP fails and you have to do something anyway.

Much equipment intended for mainland Europe comes with a moulded plug to suit their (non-standard) sockets. It's always worth checking the intended operating voltage on such equipment just in case that's intended for one of their (non-standard) voltages.

HARD FACTS



I've been toying with the idea of adding a hard card to my Amstrad 2086. However, I'm concerned about the noise (and I rather lack confidence in all that ironmongery thrashing around at a rate of knots). Can one be mounted remotely, and if so how remotely?

Incidentally, while speaking to a dealer recently I heard that most PCs are now hard disk models. I'm sure he's wrong – any comment?
Raymond Jones
Morecambe

You could mount a standard hard disk remotely – about 50cm. Standard ST506 (and it's successors) along with EDI (Enhanced Device Interface) based hard disks are serial devices but even so timing problems limit the cable length severely. With an ESDI (enhanced small device interface) or SCSI (Small Computer System Interface) drive the cables could be much longer – but the prices will be higher. I've never met anyone who has actually located their hard disk remotely, though. The fact is that most hard disks are less noisy than most fans. One possibility is a hard disk that connects via the printer port. Those we've seen are fast and quiet.

On your second point, like much of



Many people are familiar with the directory short cuts using .. but less know that you can use the single dot as well. For instance the line:

COPY *.* A:

which will copy the current disk or directory contents to A:, can be replaced by:

COPY . A:

DOT COPY

Similarly, if you are in the directory \TEXT and want to go to \TEXT\MARCH just type:

CD .\MARCH

This single dot short cut can also be used in some programs and even utilities to specify the current directory.

Conrad Warwick
Ascot

modern mass engineering, they are very reliable (for a real anxiety attack think about the speed of the valves in your car's cylinder head – and the stresses on them).

A straw poll of dealers suggests that the great majority of new PCs are sold with a hard disk. One is essential to get the best from the current generation of applications.

ALL STOP



I bought a secondhand IBM AT which lacked a manual. Eventually I noticed that the time and date weren't changing. I rang an 'IBM agent' to order a new battery and he asked for a part number – suggesting I remove the old battery to get one. Well I did this and then my machine died.

Eventually IBM's customer relations department found me someone who told me that I needed a diagnostics disk. This took me three days to find. So, beginners beware, there is a fate worse than death.

W Sweeting
Canvey Island

The AT CMOS (a special area of battery-backed, low-power RAM) contains a great deal of information about the way the machine is set up: the hard disk type, memory, floppy disk types and much more, including date and time information. The only equivalent in the XT class of machines is the Amstrad PC1512 and PC1640 NVR (Non Volatile RAM).

If the battery that supports the CMOS RAM holding the setup information is failing, the first symptom will usually be the time and date not changing. The battery has enough strength to maintain the information but not enough to alter it.

However, as you have discovered, you shouldn't start doing anything without both a new battery and a CMOS setup program since you can't use your machine

with the CMOS dead.

Since the CMOS in all machines must closely match that in the AT they are fairly standard from one machine to another – however, machines with clever chip sets, like the NEAT set, will often have setup programs that go further than the one that comes with the original IBM AT. This setup program, whatever it is called, will be on the machine utilities disk. It is very important that you get this disk with your AT class machine. Although all manufacturers supply it not all dealers pass it on. Insist on having it, after all, a dealer might stop trading, or you may move to another area.

SCREEN STRUCK



How can I produce copies of the screen for inclusion in Ventura Publisher?

J Slatem
Birmingham

Capturing the image on the screen is often desirable, though the usefulness of a screen capture utility depends on exactly what format you want the screen information in – a memory image, a graphics file or as text. To capture a screen a program must be a TSR (terminate and stay resident). Once invoked it will try to ascertain the current screen mode and save the screen to a file. I don't know of any that will work in non-standard screen modes.

At PC PLUS we capture screen images to illustrate articles on the software we review. We use Pinch, part of a software suite written by Iolo Davidson and available from S+S Enterprises (0494) 791602. This comes in three versions, one for MS-DOS screens in all standard modes, a Windows 3.0 version and one for PS/2 machines. It also includes utilities to convert text or graphic screens to PCX (PC Paintbrush) format. Most DTP and drawing programs will import PCX files, including Ventura.

Another good one is SupaSnap from

PRINTER OPTIONS



I have a Hewlett-Packard Deskjet (the basic model). I'd like to improve the printer's versatility – more fonts in more sizes and better speed (and quality) of graphics. I seem to remember a product called Freedom of Press that would convert an application's output to PostScript but why would this be better than PCL?

Richard Griffiths
Sheffield

The Deskjet is an ink-jet printer rather than a laser printer, but it has the same 300 dpi resolution and produces printout comparable to that from a laser printer. Font cards are available for the Deskjet (it

has slots for two). If you use Windows 3.0 then a scalable font Windows 3.0 driver is available (phone Hewlett-Packard on (0344) 360000 for details). You can upgrade the memory in it but HP tells me it isn't worth it. What is worth while is upgrading to Deskjet Plus, which makes it all go much faster – especially under Windows 3.0 – this will cost around £200.

If your application has no driver for a Deskjet, a Laserjet driver will probably work – HP says the situation is complex; graphics won't work properly with such a driver, for example.

PostScript emulation software takes PostScript output from an application and converts it to PCL for a laserjet-type printer. Freedom of Press (Ctrl-Alt-Deli 0908 662759) is one of the best of the utilities for intercepting output to a Laserjet and converting it into PostScript.

Clockwork Software (a version is included on the *SuperDisk*). Among other features this will convert a text screen to a text file. Many application programs come with screen grab utilities. Those I've used include *Paint II Deluxe*, *WordPerfect* and *Hotshot Graphics* (which has a utility to capture OS/2 screens as well).

Windows-based DTP packages can import files from the clipboard – including grabs of other Windows programs.

PROMPT ATTENTION



If you use several sets of AUTOEXEC.BAT and CONFIG.SYS files (to run large, fussy programs) it can be hard to remember which set is in use. I use the PROMPT command to tell me. For example, when using the set for dBASE I have the prompt:

```
PROMPT DBASE &P&G
```

in the relevant AUTOEXEC file. This gives:

```
DBASE C:\>
```

on the command line
Keith Glover
Fareham

A simple but useful idea.

EASY COPY



Faced with the problem of getting hard copy of all my BASIC programs I couldn't face loading them all and doing an LLIST, so I wrote the following batch file to do it for me. Mind, it only works if they are all saved with the ,a parameter (as ASCII files).

```
ECHO OFF
PRINT /Q:29 /B:1600
FOR %P IN (C:\BASIC\*.BAS) DO PRINT %%P
```

The /q parameter sets the number of files that can be queued (the default is 10) and the /b parameter sets the buffer size. Once this batch file is run printing goes on in the background.

Roger Anthony Wedgewood
Kingston Upon Hull

It's very easy to adapt this batch file to print any set of documents, so others should find it very useful.

Out of interest, PRINT was the very first Terminate and Stay Resident (TSR) program, I believe. It was seeing that print spooler working away in the background that encouraged others to produce TSRs – Microsoft hadn't let on that it was possible previously.

LINING DOWN



I have an Olivetti PCS286 with a colour VGA monitor. I'm writing a program in TurboBASIC. What I need to know is how to underline characters on screen. I know this is possible on a mono display by flipping bit 7 of the character attribute. At the moment I do this using the ANSI escape sequence ESC[4m. However, this doesn't work on a colour monitor, it simply sets the character attribute to blue. Is there any way around this that still keeps the program reasonably portable?

Tim Gentry
Bury

As you say, the attribute that underlines a character on a mono display (MDA or Hercules) produces blue on a colour display (or a shade of grey on a mono VGA with colour summing). There is one easy, portable solution and one awkward and not so portable solution.

The easy one is to switch to mode 7, mono text. Then the attributes work as you'd expect but you lose colour. To do this put 0 in register AH, 7 in AL and call Interrupt 10H.

The awkward way is to work in graphics mode where you can put whatever you like

BORDER ATTACK



Why is the border of my CGA screen always black except after running PC-File+, when it goes a beautiful blue, matching the rest of my screen background. Can this be made permanent from boot up?

Malcom Anderson
Epworth
Doncaster

It's really rather easy to do, and it certainly can make the screen display more attractive. The short DEBUG file below sets the border colour for CGA screens. Changing the value passed in BX alters the colour. Any number from 0 to 0FH (0 to 15 but in hex) will give a different colour as shown in the table. To use the DEBUG script enter it as an ASCII file (non document mode in word processors or saved as ASCII) called BORDER.BUG and feed it into DEBUG like so:

```
DEBUG < BORDER.BUG
```

You can use the resulting .COM file in your AUTOEXEC.BAT file to set the border colour at boot up. Very few programs will alter it and those that do can be run from a batch file that re-runs BORDER.COM afterwards.

```
A
MOV     BX,03          ;colour (03=dark cyan)
MOV     AH,0B          ;change border
INT     10
MOV     AX,4C00        ;sign off
INT     21
```

```
NBORDER.COM
RCX
C
W
Q
```

TABLE OF COLOURS

On EGA and VGA machines there is a different Int 10H service and sub-service to alter the border colour. This is of little use on EGA since the border is rather thin and nasty, but it looks good on VGA. Above right is a little Zortech C program that will set your border

colour to whatever you like.

These numbers placed in BX will result in the border colours shown

00	black
01	blue
02	green
03	cyan
04	red
05	magenta
06	brown
07	white
08	grey
09	light blue
0A	light green
0B	light cyan
0C	light red
0D	light magenta
0E	yellow
0F	bright white

```
#include <stdio.h>
#include <dos.h>
```

```
union REGS border;
char number[5];
main()
{
    int c=1;
    while(c!=100)
    {
        printf("Enter a number from 0 to 15\n");
        printf("Enter - 100 to quit\n");
        gets(number);
        c=atoi(number);
        if(c==100)
            exit(0);
        border.h.ah=0x10;
        border.h.al=1;
        border.h.bh=c;
        int86(0x10,&border,&border);
    }
}
```

SuperDisk

Dunning

COMPUTER SERVICES

DEPT PCP, Unit 13C Sunrise Business Park,
Blandford Forum, Dorset DT11 7TE

All prices include delivery
Just add VAT at 17.5%
Cheques/PO's with order or phone
our credit card hotline before 3pm for same
day despatch (subject to availability) by 1st
Class post or carrier for next day delivery
(UK mainland)

VISA (0258) 480660



RIBBONS GALORE!

We have ribbons for 1000's of printers - if yours is not listed, give us a call!
COLOURS ALSO AVAILABLE

		1	2+	5+
Amstrad DMP2000/3000	F	3.34	3.17	3.01
Amstrad DMP4000	F	4.70	4.47	4.23
Amstrad 8256/8512	F	3.44	3.27	3.10
Amstrad 8256/8512	MS	3.44	3.27	3.10
Amstrad 9512	F	3.44	3.27	3.10
Amstrad 9512	MS	2.95	2.80	2.66
Amstrad LG5000	F	5.28	5.02	4.75
Brother M1009/1224	F	3.47	3.30	3.12
Brother M1509/1709	F	4.95	4.70	4.46
Brother M1724	F	5.95	5.65	5.36
Canon 1156A	F	3.73	3.54	3.36
Citizen 120D	F	3.44	3.27	3.10
Citizen Swift 24, Swift 9	F	3.44	3.27	3.10
Commodore MPS801	F	3.34	3.17	3.01
Commodore MPS1230	F	3.43	3.26	3.09
Epson MX/RX/FX100	F	3.95	3.75	3.56
Epson LX80/86	F	2.47	2.35	2.20
Epson FX/MX/RX80	F	3.44	3.27	3.10
Epson L8800/400/500	F	3.64	3.46	3.28
Epson LX400/800	F	3.44	3.27	3.10
Epson L82550	F	5.30	5.04	4.77
H. Packard D/Jet Cart	F	14.80	14.43	14.06
NEC P220/P2+	F	4.95	4.70	4.46
NEC P6+/P7+	F	5.34	5.07	4.81
OKI 390/391	F	4.60	4.37	4.14
OKI ML 182/192	F	4.30	4.09	3.87
Olivetti DM100/200	F	3.43	3.26	3.09
Panasonic KXP1080-83	F	4.00	3.80	3.60
1090-92, 1124, 1180-90	F	6.90	6.56	6.21
Panasonic KXP1524-40	F	3.44	3.27	3.10
Seikosha SP1200	F	3.44	3.08	2.92
Star LC10	F	5.95	5.65	5.36
Star LC10.4 Col	F	3.50	3.33	3.15
Star LC24-10/LC24-200	F	5.71	5.42	5.14
Star ND/NR/NX15	F	5.11	4.85	4.60
Star NL10	F			

F = Fabric MS = Multistrike

NEXT DAY DELIVERY

COMPUTER LABELS

AVERY LABELS - The best!
Fanfold with tractor feed holes.

Available 1, 2 or 3 across - please specify

	Price per 1000		
	1000+	5000+	10000+
	£	£	£
2 3/4 x 15/16	4.25	3.04	2.68
2 3/4 x 1 7/16	5.18	3.79	3.37
3 1/2 x 15/16	4.55	3.26	2.88
3 1/2 x 1 7/16	5.64	4.56	3.87
4 x 15/16	8.18	6.00	5.44
4 x 1 7/16	6.39	4.49	3.10
4 x 1 15/16	8.19	6.05	5.47

We also have a wide range of other labels
including disk labels, small labels and laser labels

.....AND ALSO

	£		£
Copy Holder	from \$9.90	Mouse House	\$2.58
Printer Stands	from \$8.95	Envelopes	POA
Screen Filters	from \$12.45	Drive Cleaners 3"	\$4.30
Dust Cover	from \$5.64	Drive Cleaners 3 1/2"	\$3.95
Mouse Mat	\$4.30	Drive Cleaners 5 1/4"	\$3.43

DISKS

		10	50	100+
		£	£	£
3.5"	DSDD Unbranded	0.59	0.53	0.48
3.5"	DSDD Athana Brand	0.88	0.81	0.75
3.5"	DSDD KAO Brand	0.89	0.82	0.77
3.5"	DSDD Sony Brand	1.10	0.98	0.89
3.5"	DSHD Unbranded	0.95	0.89	0.82
3.5"	DSHD Athana Brand	1.59	1.44	1.37
3.5"	DSHD KAO Brand	1.62	1.49	1.39
3.5"	DSHD Sony Brand	1.89	1.71	1.58
5.25"	DSDD Unbranded	0.39	0.34	0.29
5.25"	DSDD Athana Brand	0.59	0.53	0.48
5.25"	DSDD KAO Brand	0.65	0.59	0.51
5.25"	DSHD Unbranded	0.59	0.54	0.49
5.25"	DSHD Athana Brand	0.81	0.74	0.66
5.25"	DSHD KAO Brand	0.99	0.91	0.83

CONTINUOUS PAPER

Top quality fanfold paper

		per box	1	5+
		Qty	£	£
11 x 9.5				
60GSM (M)	2000	16.38	14.88	13.40
70GSM (M)	2000	17.65	16.15	14.91
80GSM (M)	2000	19.30	17.80	16.96
90GSM (M)	1000	13.72	12.22	10.54
2 part NCR	1000	21.14	19.64	18.20
11.66 x 9.25 (A4)				
70GSM (M)	2000	19.78	18.28	17.20
80GSM (M)	2000	23.38	21.88	21.04
90GSM (M)	1000	15.37	13.87	12.19
2 part NCR	1000	32.45	30.95	29.87
11 x 14.5				
60GSM	2000	21.14	20.14	19.00
70GSM	2000	22.90	21.90	21.16
2 part NCR	1000	26.61	25.61	24.47

(M) = Micro perfs on all edges

DTP studio



18 Disks of Clipart

on 5 1/4 or 9 x 3 1/2 Disks. 250 assorted High Res 300 dpi images in .PCX for TimeWorks, DeskPress, PageMaker, Ventura and JetSetter etc. The package includes Religion, Animals, People, Tools, Music, Sport etc. They can be resized to A4 with little loss of resolution. Price £43.43 (£49.95 incl. of vat). Catalogue included. State 5% or 3% disks, no surcharge for 3 1/2 disks.

JetSetter

From 4 to 750 Point

any height & width combination

AAAAA

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

RRRR

V5.1 large stocks

call for lowest prices.

Existing users of JetSetter range from one man bands to large companies like BBC, ITV, Plessey etc. We offer the basic program to the full range of JetSetter, including 13 extra fonts, PostScript fonts, JetMacro. New version now with Spell Checker. Phone or fax Country Publications for more information on JetSetter.

Immediate Dispatch!

Typografica Fonts

New Windows 3 version

£178.26

£205 incl. VAT

with Prime Fonts

"Timeworks Trade in"

CALL

Price match in this Magazine

Add more fonts to TimeWorks & DeskPress with Typografica Standard for £64.34 (£74 incl. VAT)

Typografica prime fonts included with DeskPress are COURIOR, SANS, SERIF and SYMBOLS, or for an extra £64.35 (£74 incl. VAT) you can also have Typografica Standard Collection which includes AVANT GARDE, BOOKMAN, CENTURY SCHOOLBOOK, PALERMO, SANS NARROW, ZAPF CHANCERY, DINGBATS. (RRP £99 ex VAT) DeskPress plus both Standard & Prime Fonts £242.61 ex VAT.

Tel: numbers 0533-715160 & 720382

Fax: number 0533-720565

Country Publications

DTP studio

Dept. PCP, 79-79a Highcroft Ave.

Oadby, Leicester.

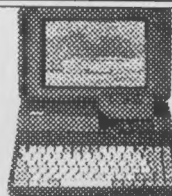
LE2 5UH

Open 9-30 to 5-30 (5.00 Saturday) Closed MONDAYS & 1st 2 weeks in July.

VISA

Access

Price match on current prices in this magazine except PD library.



Free!
Lotus 1-2-3
with 3286AT
(RRP £395)

Naksha
£36.52

Serial mouse PC-XT & AT plus FREE
Deluxe Paint II and 9 to 25 pin adaptor
£36.52 (£42 incl VAT). £5 P&P.
Serial connection NOT mouse port.



FREE! Canon BJ-10e with ALT286 & ALT386sx Call.

3086	30meg HD mono monitor	£689	(£792.35 incl. VAT)
3286AT	40meg HD mono monitor	£859	(£987.85 incl. VAT)
3386SX	40meg HD mono monitor	£999	(£1148.85 incl. VAT)
	VGA Colour monitor add	£90	(£103.50 incl. VAT)
	VGA Hi-Res Colour add	£180	(£207.00 incl. VAT)

On-Site
Warranty

Avagio

UK version
Authorised Dealer.

Avagio DTP Desk Top Publisher £119.99 (£138 incl. VAT)

Avagio has amazing features including scaleable fonts from 6 to 500 point depending on printer. Supports .PCX .TIF .PIC .EPS. Avagio actually displays .EPS images on screen. Extra clipart from Country Publications.



Free Extra 1 meg of simple ClipArt with Avagio exclusive to Country Publications.

AT computer required for Avagio.

Price match in this Magazine

Scaleable Fonts

PowerPak

£79 (£90.85 incl. VAT)

WordPerfect V5. Windows, Ventura, PageMaker, Ami, Word & Works etc. Fonts from 4 to 1000 point including outline depending on application, ie 12pt. for windows. Over 50 typefaces available (3 supplied with PowerPak) + Offers. (not GEM Apps). Also 9 foreign.

Public Domain

IBM & PC compatibles

Titles from £1.75 FREE catalogue. Inclusive of VAT & 1st class post.

1st WordPlus	£68.70	(£79 incl. VAT)
TimeWorks	£77.39	(£89 incl. VAT)
Typografica	£64.35	(£74 incl. VAT)
Corel Draw V2		
JetSetter V5.1		
PageMaker V4		
Ventura Gold	£488.70	(£562 incl. VAT)
Windows 3	£59	(£67.85 incl. VAT)

£36 off!



Free! Extra 1 meg of simple ClipArt with ALL DTP Progs.

"Special Twin Pack"
TimeWorks & 1st WordPlus £109.95 (£126.44 incl VAT)

Delivery for software and Mice £5.00 + VAT



1st Word Plus

SORTING IT OUT



Some time ago I'm sure I remember a little BASIC sort routine appearing in the Help Screen pages of PC PLUS. Can I find it? Hah! Neither can I recreate what I thought it did. This is now beginning to get under my skin, and as a last resort before I send my head to bed I thought I'd ask you.

Peter Lewis
Cardiff

That one must have been before my time as Technical Editor. However, sort routines are always useful. Finding faster sorts has frequently become obsessional with programmers (for good reasons, mind) and so there are several good sorts about. These include the Bubble sort, Insertion sort, the Heapsort and Quicksort (always available in C). The one I use when not in C is called the Shell sort (after the man who invented it).

The following QuickBASIC program uses the Shell sort to sort a text file held in a string array. By altering just the array and the lines that do the comparison and swap (46 and 47) you could make it sort on any variable type or any part of a string you like. Of course, there's always the MS-DOS utility SORT available for text files but you can't very well customise it for use in your own programs.

```
DECLARE FUNCTION shellsort! (count)
'A program to sort lines in a text file and write the
'sorted file back to a second file

COMMON inpf AS STRING
COMMON outf AS STRING

CLS
INPUT "Which ASCII file do you wish to sort ", inpf$
INPUT "What do you want the sorted file called ", outf$

OPEN "I", 1, inpf$
REM get number of lines in file
count = 1
WHILE NOT EOF(1)
    LINE INPUT #1, a$
    count = count + 1
WEND
CLOSE
result = 0
```

```
'call sort function
result = shellsort(count)
END
```

```
FUNCTION shellsort (count)
SHARED inpf AS STRING
SHARED outf AS STRING
DIM sarray$(count)
```

```
OPEN "I", 1, inpf$
OPEN "O", 2, outf$
'read in data
temp1 = 1
WHILE NOT EOF(1)
    LINE INPUT #1, temp1$
    sarray$(temp1) = temp1$
    temp1 = temp1 + 1
WEND
```

```
'the sort itself
offset = count \ 2
DO WHILE offset > 0
    limit = count - offset
    DO
```

```
        switch = 0
        (the following two lines to be entered as a single line)
        FOR row = 1 TO limit IF UCASE$(sarray$(row)) >
            UCASE$(sarray$(row + offset)) THEN
            SWAP sarray$(row), sarray$(row + offset)
            switch = row
        END IF
    NEXT row
    limit = switch - offset
    LOOP WHILE switch
    offset = offset \ 2
LOOP
```

```
'print sorted array contents to file
FOR temp1 = 1 TO count
    PRINT #2, sarray$(temp1)
NEXT
```

```
CLOSE
result = 1
shellsort = result
END FUNCTION
```

on the screen. You will need both your own character set and will probably have to track what's going on with your own (probably multiple) attribute bytes for characters. DTP programs work this way – but it's a lot of trouble just for an underline.

Of course you could just cheat and use one of the box drawing characters on the line below. Favourites are 196 and 205.

TAKE NOTE



Could you please advise me whether there is a music processing program available at a reasonable price. I want to be able to write and print musical scores on an Amstrad PC1512 and an Epson 500LQ printer.

D M Beaumont
Guernsey

There are at least two. One I know is *Composer's Pen II* which costs £125 from Composite Software (0952) 595436. The company claims that it includes 99 staves, 20 note chords, nine octave pitch range, any number tuplets, seven clefs and transposition among its features – I hope all that means something to you.

One I don't know is called *Finale*, obtainable from The Distribution Company (081-963 0663). This is a seriously

powerful package that needs Windows 3.0, 2Mbytes of memory and a hard disk as a minimum to run properly. Your machine must be an AT or better. You'll also need to have £699 to spare.

CONFIGURE IT



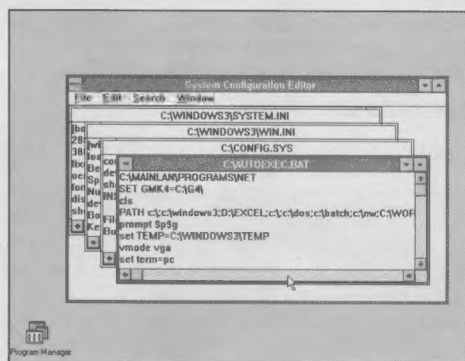
For some reason many of the utilities in Windows 3.0 aren't on the Desktop. For example, the MSDOS.EXE – the old, fast Windows 286 file manager. Another little known Windows utility is SYSEDIT. Open File Manager, look in the \WINDOWS\SYSTEM directory and drop SYSEDIT.EXE into a program group (it has a rather pretty icon). Best not to alter the WIN.INI and SYS.INI files though.

G K Garwood
Bodmin

EXPAND ON THAT



It appears that I can improve program performance on my XT compatible by fitting more memory. I work with multi-layered database programs that sometimes spend half an hour or more churning the hard disk. I can't fit more memory



● SYSEDIT puts CONFIG.SYS, AUTOEXEC.BAT, WIN.INI and SYS.INI in windows where you can view, edit or search them. You could just load them into Notebook but using SYSEDIT puts them all there in front of you without having to type in or select any filenames. And you're right, it is a nice icon.

on the motherboard and it appears that I will need a memory expansion board. I will need at least 4 Mbytes of RAM. However, at this point I start to get confused with Expanded memory, Extended memory, SIMMs, SIPs and DRAMs. Can you explain or suggest a good book on the subject?

S G Whistecraft
Dharan
Saudi Arabia


It isn't really all that confusing. An XT cannot use Extended memory, only Expanded. You need a memory expansion board which handles all the special protocols for Expanded memory in hardware. It will cost about £70 with no memory on it (unpopulated, to use the industry jargon). You then need the memory, which will cost about £100 per megabyte from the same supplier – for some reason it's almost always dearer for expansion cards than for motherboards.

However, most memory expansion cards for XT's only go up to 2 Mbytes. The supplier should populate the card for you and check that it's working correctly – be warned, they may charge extra for the service. Make sure you get the documentation for the card.

However, one point you may have overlooked is whether or not your database application will actually make any use of expanded memory. Check on this first.

VERMIN ON THE RIDICULOUS




 Did you know that the unit of measurement for mouse movement (a movement of 1/200 inch or 1/18 mm causes the horizontal or vertical mouse counters to increment or decrement by one) is called a Mickey?
PIP Squeak

I can take it, but it was sensible to remain
anony-mouse.

QUICKPRINT



 It's possible to get so tied up with complicated programs and utilities that you forget the things a PC can do without any help. I recently amazed a friend simply by echoing screen output to his printer for a quick directory printout using [Ctrl][P]. He also didn't know that he could copy a file to the printer with:

COPY FILE.DOC PRN:


Michael Harrisson, Uttoxeter

And don't forget:

TYPE FILE.DOC > LST:

BACKED DOWN



 For several years I've been using the **BACKUP** and **RESTORE** commands to keep a large database on floppy disks. When I need to work on the database I restore it. When I've finished I back it up and delete it from my hard disk freeing some four megabytes of disk space for normal use.

When I recently tried to restore the database one of the disks buzzed for a half second or so and then RESTORE asked for the next disk. I've had this happen before and it means the disk hasn't been read. Normally, trying RESTORE again cures the problem, but this time it didn't. I tried copying the files from the offending disk to a new one but instead of the 360K or so of data there was only 2K on the new disk. Without the missing data my database program can't make sense of the rest of the data file – everything is in the wrong fields.

I checked the original disk with Norton and though it shows a file of the proper size it shows only one sector on the disk used. What is going on?

Stephen Nelson
Ipswich

Without seeing the disks it's hard to be sure. It sounds as if the directory entry is correct but the FAT (File Allocation Table) information is wrong. It could be that all the data is actually there. First, DISKCOPY the offending disk. This makes a track by track copy independent of the directory or FAT information used by the COPY command. If you are going to attempt to rebuild the file using the Norton disk recovery utilities only ever work on this copy of the original damaged disk.


Few people are expert at data recovery since most have mercifully few opportunities to practice. Data recovery expertise comes expensive – but so does data. Our usual

recommendation for data recovery is Dr Alan Solomon at S+S Enterprises (0442) 877877. At the very least a good data recovery expert will re-align the remaining data so that it makes sense to the database program.

It's a good idea to follow the three generation rule when doing backups. The idea is to have three sets of backup disks that are used in rotation, so that the oldest set has the data from the backup before last. The unfortunate fact is that data is usually safer on the original hard disk than backed up to floppy disk, hence the need to build in some redundancy.

SLOW TALKING



 Can you please tell me how I can get my XT to talk to my Laserjet II faster? I am using **DeskPress** to produce a book and it can take five to ten minutes for the first page to appear.

1/ Do I need a faster computer?

2/ Is 2.5 Mbytes enough RAM for the printer?

3/ Would a print spooler help?

Andrew Bloxham
Sutton


GST tells me that on an XT that is quite good. DeskPress, like *Timeworks*, builds up a bit image of the page in memory before downloading it. PC memory constraints usually mean that it has to calculate the image a strip at a time. Fitting expanded memory will help a bit. The downloading of all that data (up to 1 Mbyte) also takes time. GST tells me that a complex image can easily take 20 minutes to print from an XT.

2.5 Mbytes is more than adequate for most printing requirements. Hewlett-Packard says that for text only, half a megabyte is adequate, for printing images using PCL you want 1.5 Mbytes, for PostScript you want 2.5 Mbytes. Of course, downloading a large number of bit mapped fonts can soak up memory rather quickly.

A faster machine will certainly enable the bit images to be calculated faster but they won't speed up the printer itself. When printing graphics laser printers come

TRICK SHOT



 **ISANSI.BAT** checks to see if **ANSI.SYS** is installed and working correctly. If it isn't then No is printed, otherwise Yes is printed. It isn't always obvious whether or not **ANSI.SYS** is installed and this batch file provides a useful quick check on unfamiliar systems.

```
echo off  
cls  
echo.  
echo Is the ANSI.SYS driver working? NO  
set xprompt=%prompt%  
prompt  
$e[2;34HYES$e[3;1H$h$h$h$h$h$h$h$h$h$h$h$h$h$h$h$h$h$_  
echo on  
echo off  
prompt %xprompt%  
set xprompt=
```

Ollie Cox
Stony Stratford

ANSI.SYS is the MS-DOS screen driver and is loaded from the

CONFIG.SYS file. Programs and batch files can use it to achieve a number of interesting effects including cursor positioning, colours and keyboard re-definition. Knowing whether or not it's loaded is useful since without it many ANSI.SYS commands just print meaningless characters to the screen.

The way this batch file works is rather clever. CLS clears the screen and places the cursor on the top line. The current prompt is then saved to a variable. The fourth line, which contains the message that ANSI.SYS isn't loaded is always printed. However, the sixth line – the new prompt – acts differently according to whether ansis.sys is present.

If it is then the cursor will be positioned on the letter N of NO, YES will be written over it and then the cursor will be repositioned at the beginning of the next line. The rest of the new prompt is then obliterated by the backspace characters.

If ANSI.SYS is not present then the prompt will appear on the line below the message and will similarly be wiped out by the backspace characters, which work anyway, leaving the NO untouched. After that the original prompt (which had been stored in the variable `xprompt`, is re-instated. All very clever and good fun besides.

SuperDisk

nowhere near their advertised speed.

What this means is that for one or two pages a faster machine with extra RAM (and perhaps print spooling) will speed things up. However, for long runs of pages with graphic content you reach a point where the printer is the limiting factor. Laser printers vary quite dramatically in speed but, depending on the complexity of the page, you can expect about half a minute to build a page image and twenty seconds to print it. To be honest, the one you have probably does better than that.

THE FAX IN THE CASE



I wish to automate my fax system. At the moment everything is done manually. I need to:

- 1/ Send, receive and store faxes.
- 2/ Send 'round robin' faxes to several hundred destinations overnight as cheaply as possible.

Ralph Norton

You're lucky in being able to draw on PC PLUS's (in fact Martin Kelly's) current expertise. During the process of collecting the vast amount of data used in the new *Buyers Guide* he has been doing just what you require.

We needed fax software and hardware that would automatically generate and send documents to multiple locations. We used equipment supplied by Datatech Systems of

Leicester (0533 460181) which consisted of a CompuCom Speedmodem and BitFax, a software package written by BIT Software Inc. It is the hardware rather than the software that determines which of the more complex fax functions are available. Virtually all PC-based fax systems enable you to send, receive and store faxes (as PCX graphic files) but advanced features are less frequently found.

The most useful feature is the ability to send the same fax to a pre-selected list of destinations chosen from a database. In fact, BitFax allows you to mail merge other information from the database into each individual fax, as distinct from the practice of broadcasting faxes where exactly the same fax is sent to every location.

We were also able to specify details about the actual fax transmission process such as specifying the time at which faxes should be sent and the number of redial attempts before the software gives up. This means that you can send faxes overnight at cheap rate or set the hardware up to get on with the job while you do other work.

Equally important is the BitFax's ability to keep a log of all attempted transmissions, their duration, time of transmission and whether they were successful. What a testimonial.

Of course there are other fax cards available. Two other companies whose products we know, and which you might like to try, are Interquadram (0753) 34421 and Computafax (0225) 777186.

PRINTER DUMP



Recently, while programming in Pascal80 (from Hisoft) I accidentally caused a screen dump from within my program – but I don't know how I did this. How can I do it on purpose?

M J Frampton
Chatham

MS-DOS has an interrupt routine to dump the screen – INT 05. Pascal80 (along with most other PC implementations of high level languages) can call interrupts directly. This one is particularly easy since it needs no registers loaded before it's called.

IN CODE



DEBUG doesn't correctly disassemble 80386 code, as I discovered recently. I tried a copy of Turbo Disassembler386 but it failed to recognise the 386 chip on my Amstrad PC2386. Is there a 386 Assembler/Disassembler package that works with this machine?

I Mosely
EastHam

The folk who know these things are at Grey Matter (0364) 53499. They tell me that you need to buy a package that suits your purpose – so give them a ring. There are hundreds of packages ranging in price from just over £100 to over £3,000.

WISDOM OF SOLOMON

Dr Alan Solomon finds it hard to go faster but does succeed in improving his memory at a bargain price.



Recently, I needed a very fast modem so that I could send large quantities of data to the US and Australia, without inordinate costs. My old 2400 baud Quattro is no longer the fastest thing on eight bits, so I asked around, and it seems that the modem of choice is the US Robotics HST Dual Standard, which is marketed by Miracom in the UK. You can get a special Sysop deal if you run a BBS

(bulletin board) with this modem, which gets you a 50 percent discount, but I was going to use these commercially, so I couldn't use that. Instead, I phoned Cliff Stanford (Demon on CIX, phone 081-349 0063) and got one for £575, which is a rather good price for a modem that goes up to 14.4 kilobaud.

At least, it felt good until I tried to connect it to the prehistoric Fido that I run (I'm Chairman of the Fido Preservation Society, dedicated to the preservation of our Fido heritage). Fido only goes up to 2400 baud, and when I re-read the documentation, I felt that I was lucky to be getting that.

THANKS FOR THE MEMORY

How much are you paying for memory these days? There are some really good bargains around – prices are falling so fast that I'd rather not give you a specific target price to aim for. What you should do, is phone Dram (061-494 9001), Kingston (0793 854332), SMT (0536 402321), Richnight (081 668 4199) and Rombyte (0635 528006). Play each one off against the others, and aim at around £30 per megabyte for standard memory.

Will cheap memory last for ever? It goes in cycles; when prices get too low, capacity gets shut down, which leads to a shortage, which pushes prices up, which leads to capacity being increased, which leads to overcapacity... and so on. Economists call this the hog cycle.

I'm buying a 486 with 8 Mbyte on the motherboard, and aiming for about £1,500 for the motherboard. But I'm making sure that the motherboard can go up to 16 Mbyte, in case I want to upgrade.

COMPILATIONS

Jensen and Partners (071-253 4333) has just launched a range of cheap compilers. I haven't looked at them yet, but I gather that the same code can be compiled under MS-DOS, Windows and OS/2, with the compilers costing about £59 each. I'm hoping that the Pascal compiler is out soon. Trouble is, it isn't Turbo compatible. Oh well, you can't have everything, and being able to offer the same code under multiple operating systems would be nice (although there don't seem to be too many people running OS/2 yet).

EXCHANGE RATES

I expect you're wondering whether Susan liked the £399 Zenith Minisport that she had for her birthday. She did, but she liked my Arche Messenger more, so we swapped, and the Zenith (which has to be called Zeke for obvious reasons) is now my briefcase machine. We had some hassle getting the 2-inch diskettes, as it seems there are two kinds, the right kind and the wrong kind. You can get the right kind from Kaytech on 081-313 0990, but you should expect to pay an arm and a leg.

EXTENDED WORDS



I would like to contribute the following *Word* for *Windows* macro which enables a selected block to be spell-checked without having to check the entire document. This is very useful if you wish to spell-check a document that contains 'boiler plates' (which are already error-free), or passages which are likely to be full of unrecognised 'words' such as lists of names or uncommon acronyms. In using the routine, be sure to save the temporary document is that the corrections can be copied back to the parent document.

The second macro works in much the same way, on a selected block of text, but performs a word count.

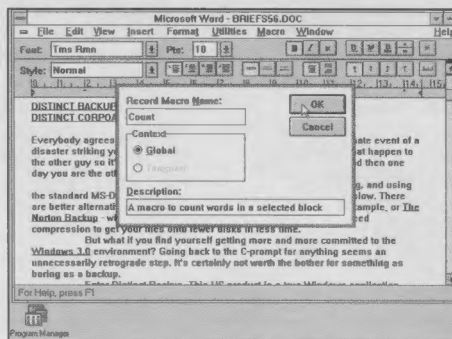
I hope these prove useful to others, and in return, if anyone can tell me how to get a *Word* macro to pause for given time delay before continuing I would be very grateful.

S.G.P. Geoghegan
St Agnes

These are the kind of features that a good word processor ought to support anyway, though usually you have to do them yourself. That being the case the next best thing is to have someone else do the work for you.

The easiest way to import these macros into your own program is to create a dummy macro with a suitable name. Now open this for editing from the macro menu. Open the TXT file on the *SuperDisk* and cut and paste the relevant text. You may find the Save option is greyed out but when you quit the file you'll be asked if you want to save the changes. Save them and away you go. It's well worth the effort to add useful macros to the menus in *Word* for *Windows*.

```
Sub MAIN
REM This Macro SPELL-CHECKS the words in chosen BLOCK of text
REM Opens a temporary document and copies in chosen block
EditCopy
FileNew .NewTemplate = 0, .Template = "NORMAL"
EditPaste
StartOfDocument
REM SendKeys send keystrokes to a waiting Dialog Box
SendKeys "{Enter}", - 1
```



SuperDisk

● Create a dummy macro by turning the recorder on, providing a name and then immediately turning macro recording off again

```
REM Enter for Start.
REM
REM Open Spelling dialog to receive keystrokes
UtilsSpelling
REM Temporary document will now be closed
(the following two lines are to be typed as one)
MsgBox("If you've corrected spellings, SAVE this temporary file,
then PASTE back changes to the original", "I Save Changes!", 16)
FileClose
End Sub

Sub MAIN
REM This Macro COUNTS the words in chosen BLOCK of text
REM Opens a temporary document and copies in chosen block
EditCopy
FileNew .NewTemplate = 0, .Template = "NORMAL"
EditPaste
REM Totals the words found in the copied block
EditSummaryInfo .Update
Dim dlg As EditSummaryInfo
GetCurValues dlg
NoOfWords$ = dlg.NumWords
REM The following puts current word count into a Message Box
(the following two lines are to be typed as one)
MsgBox("Words counted in the chosen BLOCK total: " +
NoOfWords$, "Word Count", 64)
REM Temporary document will now be closed
FileClose 2
End Sub
```

The PC PLUS Fact Panel Guide

These days there's no such thing as a 'standard' PC – instead we've got a range of different disk sizes, graphics adaptors and hardware add-ons, such as mice, modems and memory boards. This makes the claim that a piece of software 'Runs on IBM Compatibles' a bit meaningless, so we're introducing a fact panel on all our reviews which shows exactly what hardware you need to run the program, and what optional equipment the program can make use of. The fact panel has four sections,

1. Display types.

This section shows the type(s) of screen display supported by the program. Remember that your PC's display type is determined by its combination of display adaptor and monitor, so for example a PC1640 will have a Hercules, CGA or EGA display depending on the MD, CD or ECD monitor in use. The icons are as follows:

- [T] 80x25 character text-only – runs on any IBM-compatible PC.
- [H] Displays Hercules monochrome graphics on Hercules-compatible machines.
- [C] Displays Colour Graphics Adaptor (CGA) quality graphics on CGA, EGA and VGA machines.
- [E] Displays Enhanced Graphics Adaptor (EGA) quality text/graphics on EGA and VGA machines.
- [V] Displays Video Graphics Array (VGA) quality text/graphics on VGA machines only.
- [M] Displays Multi-Colour Graphics Array (MCGA) graphics on MCGA machines.
- [S] Displays PC1512 16-colour graphics on the PC1512 only.
- [Y] Displays Tandy Graphics Adaptor graphics on Tandy compatible machines.
- [GEM] [W] Windows

Windows and GEM are both Graphical User Interfaces, which adjust automatically to make the best use of [H] [C] [E] and [V] displays. Other types may also be supported. You may need to buy Windows or GEM separately.

Programs with just a [T] work on all IBM-compatible PCs, since all types of display adaptor support a standard text-only mode, which includes the 'IBM graphics character set' –

the boxes, lines and funny faces used by many programs. Monochrome systems may interpret colour text codes (or 'attributes') as flashing, underline etc.

Other icons refer to 'all points addressable' graphics displays, used in business graphics (e.g. Lotus-style spreadsheets), painting and drawing programs, desktop publishers, games and others.

A program may have more than one icon – for example, [H] [C] means that the software works with both Hercules and CGA adaptors.

2. Issue Disks

This tells you what type of floppy disk the software is supplied on.

- [5.25"] 5.25", 360K floppy, or 1.2Mbyte if marked '1.2'.
- [3.5"] 3.5", 720K floppy, or 1.4 Mbyte if marked '1.4'.
- [One icon] One icon means only available on that disk type (though check with your dealer)
- [Two icons] both types supplied as standard
- [Choice icon] or [Choice icon] 5.25/3.5 choice – see price for details.

3. Minimum Hardware requirements

Items in this section are mandatory – either the program won't run at all without them, or would be unuseable in practice. The icons are:

- [Floppy icon] Single floppy
- [Floppy icon] Twin floppy
- [Hard disk icon] Hard disk
- [80286 icon] 80286 processor chip
- [80386 icon] 80386 processor chip
- [Mouse icon] Mouse

- [Joystick icon] Joystick
- [Matrix printer icon] Matrix printer
- [Laser printer icon] Laser printer (Note 1)
- [Telephone icon] Telephone line and modem
- [RAM icon] Minimum free RAM, after MS-DOS and any resident programs are loaded.
- [EMS icon] Expanded Memory Specification (EMS) card (see Note 2)
- [Maths icon] Maths co-processor chip (e.g. 8087 for standard PCs, 80287 for ATs and so forth)

4. Other hardware supported

These items are not mandatory, but the program can make use of them. The icons are the same as those used in the minimum hardware section.

Notes: 1. Most laser printers will emulate Epson FX series matrix printers, so will work in basic mode with a matrix-only program. A laser driver indicates support for special fonts and high-resolution graphics. Always double check that your particular model of matrix or laser printer is supported.

2. There are various EMS standards around, the most popular being LIM EMS version 4.0. Check that your type is supported by the program.

OUR VALUE VERDICTS

Product fact boxes also contain verdict ratings, in the range 0 - 5, covering four areas of the product – Range of Features, Overall Speed, Ease of use and Documentation – plus an overall Value verdict.

These ratings are made in the context of the program's price and intended position in the market, so a £25 filer which provides good sorting facilities might get a Range of Features rating of 4, while a £600 bells-and-whistles database which couldn't import text data might be marked down to three. The overall value verdict is made on the same basis. It is quite possible for a very expensive product to be excellent value for money because it really does do the job well, while a very cheap product might be poor value because it is too lacking in features to do anything at all.